AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An apparatus for ~~measuring~~ deriving a state parameter of an individual, comprising:

a processor;

at least ~~two~~ one physiological sensor and at least one other sensors for generating first and second sets of sensor output signals, said sensor output signals being directed to an~~in~~ electronic communication link with said processor~~, at least one of said sensors being a physiological sensor~~which performs respective first and second functions based upon said first and second sensor output signals; ~~and~~

~~a memory storing software executable by said processor, said software including instructions for:~~

~~collecting a plurality of sensor signals from said at least two sensors; and~~wherein said

~~utilizing a~~ first set of sensor output signals causes said processor to determine at least one parameter of said ~~based on one or more of said plurality of sensor signals in a~~ first function, said processor utilizing said at least one first function parameter to determine ~~ing~~ how said processor utilizes said a second set of sensor output signals in said second function; said processor ~~based on one or more of said plurality of sensor signals is~~ utilizing said ~~ed in one or more~~ second function~~s~~ to derive ~~, each of said one or more second functions having an output,~~

~~wherein one or more of said outputs are used to predict~~ said state parameter of said individual.

2. (Withdrawn) An apparatus according to claim 1, wherein said first function recognizes one or more contexts based on said first set of signals, wherein one or more of said second functions is chosen based on said one or more recognized contexts, and wherein said outputs of said chosen second functions are used to predict said state parameter of said individual.

3. (Currently Amended) An apparatus according to claim 1, wherein said first function recognizes each of a plurality of contexts based on said first set of sensor output signals, ~~wherein each of~~ said ~~one or more~~ second function ~~s~~ corresponds to at least one of said contexts, ~~wherein~~ said first function parameter being associated with ~~assigns~~ a weight which is utilized by said processor to determine ~~to each of~~ said ~~one or more~~ second functions based on a recognition probability associated with the corresponding context, and ~~wherein said outputs~~ of said ~~one or more~~ second functions and said weights are used to predict said state parameter of said individual.

4. (Currently Amended) An apparatus according to claim 1, ~~said instructions~~ further comprising electronically combining said outputs ~~in a post processing step~~ to predict said state parameter.

5. (Currently Amended) An apparatus according to claim 1, wherein said second functions ~~are~~ is a regression algorithms.

6. (Currently Amended) An apparatus according to claim 3, wherein said state parameter is the caloric expenditure of said individual.

7. (Currently Amended) An apparatus according to claim 6, wherein said contexts include ~~comprise~~ a resting and an active state of said individual.

8. (Original) An apparatus according to claim 7, said first function comprising a naïve Bayesian classifier.

9. (Currently Amended) An apparatus according to claim 7, wherein said ~~at least two~~ sensors are selected from the group consisting of ~~including~~ a body motion sensor, a heat flux sensor and a skin conductance sensor.

10. (Original) An apparatus according to claim 9, said body motion sensor being an accelerometer and said skin conductance sensor being a GSR sensor.

11. (Currently Amended) An apparatus according to claim 1, wherein said state parameter is the caloric expenditure of said individual for a period of time, said ~~instructions~~ processor ~~further comprising~~ generating caloric consumption data for said individual for said period of time, the apparatus further comprising a ~~and~~ displaying which identifies ~~information based on~~ said caloric expenditure data and said caloric consumption data.

12. (Currently Amended) An apparatus according to claim 11, further comprising an input device in electronic communication with said processor, said caloric consumption data being ~~generated~~ determined from information collected by said input device from said individual relating to foods eaten by said individual.

13. (Original) An apparatus according to claim 11, wherein said displayed information includes energy balance data.

14. (Original) An apparatus according to claim 11, wherein said displayed information includes a rate of weight loss or gain of said individual.

15. (Currently Amended) An apparatus according to claim 11, wherein said displayed information includes information relating to one or more goals of said individual, said goals relating to the monitoring and status of one or more of caloric consumption, caloric expenditure, energy balance and rate of weight loss or gain for said individual for said period of time.

16. (Currently Amended) An apparatus according to claim 3, wherein said state parameter is the caloric expenditure of said individual for a period of time, said ~~instructions~~ processor ~~further comprising~~ generating caloric consumption data for said individual for said period of time and further comprising a display~~ing~~ which identifies ~~information based on~~ said caloric expenditure data and said caloric consumption data.

17. (Currently Amended) An apparatus according to claim 16, further comprising an input device in electronic communication with said processor, said caloric consumption data being generated from information collected from said ~~individual~~ input device relating to foods eaten by said individual.

18. (Original) An apparatus according to claim 16, wherein said displayed information includes energy balance data.

19. (Original) An apparatus according to claim 16, wherein said displayed information includes a rate of weight loss or gain of said individual.

20. (Currently Amended) An apparatus according to claim 16, wherein said displayed information includes information relating to one or more goals of said individual, said goals relating to the monitoring and status of one or more of caloric consumption, caloric expenditure, energy balance and rate of weight loss or gain for said individual for said period of time.

21. (Withdrawn) An apparatus according to claim 1, said processor and said memory being included in a wearable sensor device.

22. (Original) An apparatus according to claim 21, said at least two sensors being included in said wearable sensor device.

23. (Withdrawn) An apparatus according to claim 21, at least one of said at least two sensors being located separately from said wearable sensor device.

24. (Currently Amended) An apparatus according to claim 1, said apparatus ~~including~~ further comprising a wearable sensor device including said sensors which is mounted on said individual, said processor ~~and said memory~~ being included in a computing device located separately from said sensor device, each of said computing device and said sensor device having transmitting and receiving circuitry for generating and receiving electronic signals which include said electronic communication link. ~~said collecting instruction including receiving said sensor signals with said sensor device and transmitting said sensor signals from said sensor device to said computing device.~~

25. (Original) A method of measuring a state parameter of an individual, comprising:

collecting a plurality of sensor signals from at least two sensors in electronic communication with a sensor device worn on a body of said individual, at least one of said sensors being a physiological sensor; and

utilizing a first set of signals based on one or more of said plurality of sensor signals in a first function, said first function determining how a second set of signals based on one or more of said plurality of sensor signals is utilized in one or more second functions, each of said one or more second functions having an output,

wherein one or more of said outputs are used to predict said state parameter of said individual.

26. (Withdrawn) A method according to claim 25, wherein said first function recognizes one or more contexts based on said first set of signals, wherein one or more of said second functions is chosen based on said one or more recognized contexts, and wherein said outputs of said chosen second functions are used to predict said state parameter of said individual.

27. (Original) A method according to claim 25, wherein said first function recognizes each of a plurality of contexts based on said first set of signals, wherein each of said one or more second functions corresponds to one of said contexts, wherein said first function assigns a weight to each of said one or more second functions based on a recognition probability associated with the corresponding context, and wherein said outputs of said one or more second functions and said weights are used to predict said state parameter of said individual.

28. (Original) A method according to claim 25, further comprising combining said outputs in a post processing step to predict said state parameter.

29. (Original) A method according to claim 25, wherein said second functions are regression algorithms.

30. (Original) A method according to claim 27, wherein said state parameter is caloric expenditure of said individual.

31. (Original) A method according to claim 30, wherein said contexts comprise rest and active.

32. (Original) A method according to claim 31, said first function comprising a naïve Bayesian classifier.

33. (Original) A method according to claim 31, said at least two sensors comprising a body motion sensor, a heat flux sensor and a skin conductance sensor.

34. (Original) A method according to claim 33, said body motion sensor being an accelerometer and said skin conductance sensor being a GSR sensor.

35. (Original) A method according to claim 25, wherein said state parameter is caloric expenditure of said individual for a period of time, said method further comprising generating caloric consumption data for said individual for said period of time and displaying information based on said caloric expenditure data and said caloric consumption data.

36. (Original) A method according to claim 35, said caloric consumption data being generated from information collected from said individual relating to foods eaten by said individual.

37. (Original) A method according to claim 35, wherein said displayed information includes energy balance data.

38. (Original) A method according to claim 35, wherein said displayed information includes a rate of weight loss or gain of said individual.

39. (Original) A method according to claim 35, wherein said displayed information includes information relating to one or more goals of said individual, said goals relating to one or more of caloric consumption, caloric expenditure, energy balance and rate of weight loss or gain.

40. (Original) A method according to claim 27, wherein said state parameter is caloric expenditure of said individual for a period of time, said method further comprising generating caloric consumption data for said individual for said period of time and displaying information based on said caloric expenditure data and said caloric consumption data.

41. (Original) A method according to claim 40, said caloric consumption data being generated from information collected from said individual relating to foods eaten by said individual.

42. (Original) A method according to claim 40, wherein said displayed information includes energy balance data.

43. (Original) A method according to claim 40, wherein said displayed information includes a rate of weight loss or gain of said individual.

44. (Original) A method according to claim 40, wherein said displayed information includes information relating to one or more goals of said individual, said goals relating to one or more of caloric consumption, caloric expenditure, energy balance and rate of weight loss or gain.

45. (Withdrawn) A method of making software for an apparatus for measuring a state parameter of an individual, comprising:

providing a first sensor device, said first sensor device receiving a plurality of signals from at least two sensors;

using said first sensor device to create a first function and one or more second functions, each of said one or more second functions having an output, said first function utilizing a first set of signals based on one or more of said plurality of sensor signals to determine how a second set of signals based on one or more of said plurality of sensor signals is utilized in said one or more second functions, wherein one or more of said outputs are used to predict said state parameter of said individual; and

creating said software including instructions for: (i) receiving a second plurality of signals collected by a second sensor device substantially structurally identical to said first sensor device for a period of time; (ii) utilizing a third set of signals based on one or more of said second plurality of sensor signals in said first function to determine how a fourth set of signals based on one or more of said second plurality of sensor signals is utilized in said one or more

second functions; and (iii) utilizing said one or more outputs produced by said one or more second functions from said fourth set of signals to predict said state parameter of said individual.

46. (Withdrawn) A method according to claim 45, said apparatus comprising said second sensor device, said method further comprising storing said software in said second sensor device, said second sensor device having a processor for executing said software.

47. (Withdrawn) A method according to claim 45, said apparatus comprising said second sensor device and a computing device in electronic communication with said second sensor device for receiving said second plurality of signals from said second sensor device, said method further comprising storing said software in a computer readable medium for subsequent transfer to said computing device, said computing device having a processor for executing said software.

48. (Withdrawn) A method according to claim 45, wherein said step of using said sensor device to create said first function and said one or more second functions includes gathering a first set of said plurality of signals under conditions where said state parameter is present, contemporaneously gathering gold standard data relating to said state parameter, and using one or more machine learning techniques to generate said first function and said one or more second functions from said first set of said plurality of signals and said gold standard data.

49. (Withdrawn) A method according to claim 45, said at least two sensors being included in said first sensor device.

50. (Withdrawn) A method according to claim 45, at least one of said at least two sensors being located separately from said first sensor device.

51. (Withdrawn) A method according to claim 45, wherein said first function recognizes one or more contexts based on said first set of signals, wherein one or more of said second functions is chosen based on said one or more recognized contexts, and wherein said outputs of said chosen second functions are used to predict said state parameter of said individual.

52. (Withdrawn) A method according to claim 45, wherein said first function recognizes each of a plurality of contexts based on said first set of signals, wherein each of said one or more second functions corresponds to one of said contexts, wherein said first function assigns a weight to each of said one or more second functions based on a recognition probability associated with the corresponding context, and wherein said outputs of said one or more second functions and said weights are used to predict said state parameter of said individual.

53. (Withdrawn) A method according to claim 45, said utilizing instruction comprising combining said outputs produced by said one or more second functions from said fourth set of signals in a post processing step to predict said state parameter.

54. (Withdrawn) A method according to claim 45, wherein said second functions are regression algorithms.

55. (Withdrawn) A method according to claim 52, wherein said state parameter is caloric expenditure of said individual.

56. (Withdrawn) A method according to claim 55, wherein said contexts comprise rest and active.

57. (Withdrawn) A method according to claim 56, said first function comprising a naïve Bayesian classifier.

58. (Withdrawn) A method according to claim 56, said at least two sensors comprising a body motion sensor, a heat flux sensor and a skin conductance sensor.

59. (Withdrawn) A method according to claim 58, said body motion sensor being an accelerometer and said skin conductance sensor being a GSR sensor.

60. (Withdrawn) A method of measuring energy expenditure of an individual, comprising:

collecting a plurality of sensor signals from at least two of a body motion sensor, a heat flux sensor, a skin conductance sensor, and a skin temperature sensor, each in electronic communication with a sensor device worn on a body of said individual; and

utilizing a first set of signals based on one or more of said plurality of sensor signals in one or more functions to predict said energy expenditure of said individual.

61. (Withdrawn) A method according to claim 60, said collecting step comprising collecting said plurality of sensor signals from a body motion sensor, a heat flux sensor, and a skin conductance sensor.

62. (Withdrawn) A method according to claim 61, said body motion sensor being an accelerometer and said skin conductance sensor being a GSR sensor.

63. (Withdrawn) A method according to claim 60, said utilizing step comprising utilizing said first set of signals in a first function, said first function determining how a second set of signals based on one or more of said plurality of sensor signals is utilized in one or more second functions, each of said one or more second functions having an output;

wherein one or more of said outputs are used to predict said energy expenditure of said individual.

64. (Withdrawn) A method according to claim 63, wherein said first function recognizes one or more contexts based on said first set of signals, wherein one or more of said second functions is chosen based on said one or more recognized contexts, and wherein said outputs of said chosen second functions are used to predict said energy expenditure of said individual.

65. (Withdrawn) A method according to claim 63, wherein said first function recognizes each of a plurality of contexts based on said first set of signals, wherein each of said

one or more second functions corresponds to one of said contexts, wherein said first function assigns a weight to each of said one or more second functions based on a recognition probability associated with the corresponding context, and wherein said outputs of said one or more second functions and said weights are used to predict said energy expenditure of said individual.

66. (Withdrawn) A method according to claim 63, further comprising combining one or more of said outputs in a post processing step to predict said energy expenditure of said individual.

67. (Withdrawn) A method according to claim 63, wherein said second functions are regression algorithms.

68. (Withdrawn) A method according to claim 65, wherein said contexts comprise rest and active.

69. (Withdrawn) A method according to claim 68, said first function comprising a naïve Bayesian classifier.

70. (Withdrawn) A method according to claim 68, said collecting step comprising collecting said plurality of sensor signals from a body motion sensor, a heat flux sensor, and a skin conductance sensor, said second set of signals comprising a heat flux high gain average variance (HFvar), a vector sum of transverse and longitudinal accelerometer SADs (VSAD), and a galvanic skin response low gain (GSR), wherein said second functions have the form of

A*VSAD + B*HF+C*GSR+D*BMR+E, wherein A, B, C, D and E are constants and BMR is a basal metabolic rate for said individual.

71. (Withdrawn) An apparatus for measuring energy expenditure of an individual, comprising

a processor;

at least two of a body motion sensor, a heat flux sensor, a skin conductance sensor, and a skin temperature sensor in electronic communication with said processor; and

a memory storing software executable by said processor, said software including instructions for:

collecting a plurality of sensor signals from said at least two of a body motion sensor, a heat flux sensor, a skin conductance sensor, and a skin temperature sensor; and

utilizing a first set of signals based on one or more of said plurality of sensor signals in one or more functions to predict said energy expenditure of said individual.

72. (Withdrawn) An apparatus according to claim 71, said collecting instruction comprising collecting said plurality of sensor signals from a body motion sensor, a heat flux sensor, and a skin conductance sensor.

73. (Withdrawn) An apparatus according to claim 72, said body motion sensor being an accelerometer and said skin conductance sensor being a GSR sensor.

74. (Withdrawn) An apparatus according to claim 71, said utilizing instruction comprising utilizing said first set of signals in a first function, said first function determining how a second set of signals based on one or more of said plurality of sensor signals is utilized in one or more second functions, each of said one or more second functions having an output;

wherein one or more of said outputs are used to predict said energy expenditure of said individual.

75. (Withdrawn) An apparatus according to claim 74, wherein said first function recognizes one or more contexts based on said first set of signals, wherein one or more of said second functions is chosen based on said one or more recognized contexts, and wherein said outputs of said chosen second functions are used to predict said energy expenditure of said individual.

76. (Withdrawn) An apparatus according to claim 74, wherein said first function recognizes each of a plurality of contexts based on said first set of signals, wherein each of said one or more second functions corresponds to one of said contexts, wherein said first function assigns a weight to each of said one or more second functions based on a recognition probability associated with the corresponding context, and wherein said outputs of said one or more second functions and said weights are used to predict said energy expenditure of said individual.

77. (Withdrawn) An apparatus according to claim 74, said instructions further comprising combining said one or more outputs in a post processing step to predict said energy expenditure of said individual.

78. (Withdrawn) An apparatus according to claim 74, wherein said second functions are regression algorithms.

79. (Withdrawn) An apparatus according to claim 76, wherein said contexts comprise rest and active.

80. (Withdrawn) An apparatus according to claim 79, said first function comprising a naïve Bayesian classifier.

81. (Withdrawn) An apparatus according to claim 79, said collecting instruction comprising collecting said plurality of sensor signals from a body motion sensor, a heat flux sensor, and a skin conductance sensor, said second set of signals comprising a heat flux high gain average variance (HFvar), a vector sum of transverse and longitudinal accelerometer SADs (VSAD), and a galvanic skin response low gain (GSR), wherein said second functions have the form of A*VSAD + B*HF+C*GSR+D*BMR+E, wherein A, B, C, D and E are constants and BMR is a basal metabolic rate for said individual.

82. (Withdrawn) A method of making software for an apparatus for measuring energy expenditure of an individual, comprising:

providing a first sensor device, said first sensor device receiving a plurality of signals from at least two of a body motion sensor, a heat flux sensor, a skin conductance sensor, and a skin temperature sensor;

using said first sensor device to create one or more functions that predict said energy expenditure of said individual using a first set of signals based on one or more of said plurality of sensor signals; and

creating said software including instructions for: (i) receiving a second plurality of signals collected by a second sensor device substantially structurally identical to said first sensor device for a period of time, said second sensor device receiving said second plurality of signals from at least two of a body motion sensor, a heat flux sensor, a skin conductance sensor, and a skin temperature sensor; and (ii) utilizing a second set of signals based on one or more of said second plurality of sensor signals in said one or more functions to predict said energy expenditure of said individual.

83. (Withdrawn) A method according to claim 82, said apparatus comprising said second sensor device, said method further comprising storing said software in said second sensor device, said second sensor device having a processor for executing said software.

84. (Withdrawn) A method according to claim 82, said apparatus comprising said second sensor device and a computing device in electronic communication with said second sensor device for receiving said second plurality of signals from said second sensor device, said method further comprising storing said software in a computer readable medium for subsequent transfer to said computing device, said computing device having a processor for executing said software.

85. (Withdrawn) A method according to claim 82, wherein said step of using said sensor device to create said one or more functions includes gathering a first set of said plurality of signals under conditions where energy expenditure data for said individual is present, contemporaneously gathering gold standard data relating to said energy expenditure data for said individual, and using one or more machine learning techniques to generate said one or more functions from said first set of said plurality of signals and said gold standard data.

86. (Withdrawn) A method according to claim 82, said first sensor device receiving said plurality of signals from a body motion sensor, a heat flux sensor, and a skin conductance sensor.

87. (Withdrawn) A method according to claim 86, said body motion sensor being an accelerometer and said skin conductance sensor being a GSR sensor.

88. (Withdrawn) A method according to claim 82, said utilizing instruction comprising utilizing said second set of signals in a first function, said first function determining how a third set of signals based on one or more of said second plurality of sensor signals is utilized in one or more second functions, each of said one or more second functions having an output;

wherein one or more of said outputs are used to predict said energy expenditure of said individual.

89. (Withdrawn) A method according to claim 88, wherein said first function recognizes one or more contexts based on said second set of signals, wherein one or more of said second functions is chosen based on said one or more recognized contexts, and wherein said outputs of said chosen second functions are used to predict said energy expenditure of said individual.

90. (Withdrawn) A method according to claim 88, wherein said first function recognizes each of a plurality of contexts based on said second set of signals, wherein each of said one or more second functions corresponds to one of said contexts, wherein said first function assigns a weight to each of said one or more second functions based on a recognition probability associated with the corresponding context, and wherein said outputs of said one or more second functions and said weights are used to predict said energy expenditure of said individual.

91. (Withdrawn) A method according to claim 88, said utilizing instruction further comprising combining said outputs in a post processing step to predict said energy expenditure of said individual.

92. (Withdrawn) A method according to claim 88, wherein said second functions are regression algorithms.

93. (Withdrawn) A method according to claim 90, wherein said contexts comprise rest and active.

94. (Withdrawn) A method according to claim 93, said first function comprising a naïve Bayesian classifier.

95. (Withdrawn) A method according to claim 93, said receiving instruction comprising receiving said second plurality of sensor signals from a body motion sensor, a heat flux sensor, and a skin conductance sensor, said third set of signals comprising a heat flux high gain average variance (HFvar), a vector sum of transverse and longitudinal accelerometer SADs (VSAD), and a galvanic skin response low gain (GSR), wherein said second functions have the form of A*VSAD + B*HF+C*GSR+D*BMR+E, wherein A, B, C, D and E are constants and BMR is a basal metabolic rate for said individual.

96. (Cancelled)

97. (Withdrawn) An apparatus according to claim 96, said processor and said memory being included in a wearable sensor device.

98. (Cancelled)

99. (Withdrawn) An apparatus according to claim 97, at least one of said one or more sensors being located separately from said wearable sensor device.

100 - 119. (Cancelled)

120. (Withdrawn) A method according to claim 119, wherein said inputting and obtaining steps are performed by a processor included in said sensor device.

121. (Cancelled)

122. (Cancelled)

123. (Withdrawn) A method according to claim 119, at least one of said one or more sensors being located separately from said sensor device.

124 - 138. (Cancelled)

139. (Withdrawn) A method of making software for an apparatus for automatically measuring a first state parameter of an individual, comprising:

providing a first sensor device, said first sensor device receiving one or more signals from one or more sensors;

using said first sensor device to create a first function having a first output that predicts one or more second state parameters of said individual and either said first state parameter or an indicator of said first state parameter, wherein said first state parameter may be obtained from said indicator based on a first relationship between said first state parameter and said indicator, said first function taking as inputs one or more signal channels based on said one or more signals;

using said first sensor device to create a second function having a second output

that predicts said one or more second state parameters but not said first state parameter or said indicator of said first state parameter, said second function taking as inputs said one or more signal channels;

creating said software including instructions for: (i) receiving a second one or more signals collected by a second sensor device substantially structurally identical to said first sensor device for a period of time; (ii) inputting a second one or more signal channels based on said second one or more signals into said first function and said second function for generating said first output and said second output, respectively; and (iii) obtaining either said first state parameter or said indicator from said first and second outputs generated in said inputting step based on a second relationship between said first function and said second function, and, if said indicator is obtained, obtaining said first state parameter from said indicator based on said first relationship.

140. (Withdrawn) A method according to claim 139, said apparatus comprising said second sensor device, said method further comprising storing said software in said second sensor device, said second sensor device having a processor for executing said software.

141. (Withdrawn) A method according to claim 139, said apparatus comprising said second sensor device and a computing device in electronic communication with said second sensor device for receiving said second one or more signals from said second sensor device, said method further comprising storing said software in a computer readable medium for subsequent transfer to said computing device, said computing device having a processor for executing said software.

142. (Withdrawn) A method according to claim 139, wherein said step of using said sensor device to create said first function includes gathering a first set of said one or more signals under conditions where said second state parameters and either said first state parameter or said indicator are present, contemporaneously gathering gold standard data relating to said second state parameters and either said first state parameter or said indicator, and using one or more machine learning techniques to generate said first function from said first set of one or more signals and said gold standard data, and wherein said step of using said sensor device to create said second function includes gathering a second set of said one or more signals under conditions where neither said first state parameter nor said indicator are present, contemporaneously gathering second gold standard data relating to said second state parameters but not said first state parameter or said indicator, and using one or more machine learning techniques to generate said second function from said second set of one or more signals and said second gold standard data.

143. (Withdrawn) A method according to claim 139, said one or more sensors being included in said first sensor device.

144. (Withdrawn) A method according to claim 139, at least one of said one or more sensors being located separately from said first sensor device.

145. (Withdrawn) A method according to claim 139, said one or more sensors comprising at least two sensors and said one or more signals comprising of at least two signals.

146. (Withdrawn) A method according to claim 139, said second relationship comprising a subtractive relationship.

147. (Withdrawn) A method according to claim 139, said first state parameter being obtained from said indicator by dividing said indictor by a first factor.

148. (Withdrawn) A method according to claim 139, said first state parameter comprising a number of calories consumed by said individual during said period of time.

149. (Withdrawn) A method according to claim 148, said indicator comprising a first effect on the body of food consumed.

150. (Withdrawn) A method according to claim 149, said indicator being thermic effect of food.

151. (Withdrawn) A method according to claim 150, said first output comprising total energy expenditure, wherein said one or more second state parameters include basal metabolic rate, activity energy expenditure and adaptive thermogenesis.

152. (Withdrawn) A method according to claim 151, said first state parameter being obtained from said indicator by dividing said indicator by a first amount.

153. (Withdrawn) A method according to claim 152, said first amount being 0.1.

154. (Withdrawn) A method according to claim 148, said software further including instructions for generating caloric expenditure data for said individual for said period of time from one or more of said second one or more signal channels and displaying information based on said caloric expenditure data and said number of calories consumed by said individual.

155. (Withdrawn) A method according to claim 154, wherein said displayed information includes energy balance data.

156. (Withdrawn) A method according to claim 154, wherein said displayed information includes a rate of weight loss or gain of said individual.

157. (Withdrawn) A method according to claim 154, wherein said displayed information includes information relating to one or more goals of said individual, said goals relating to one or more of caloric consumption, caloric expenditure, energy balance and rate of weight loss or gain.

158. (Withdrawn) A method according to claim 151, said at least two sensors including a body motion sensor, a heat flux sensor and a skin conductance sensor.

159. (Withdrawn) A method according to claim 139, said one or more sensors selected from the group consisting of physiological sensors and contextual sensors.

160. (Withdrawn) A method of measuring caloric consumption of an individual for a time period, comprising:

determining a weight differential for said individual between a beginning of said time period and an end of said time period;

multiplying said weight differential by a constant to obtain a caloric differential;

measuring a caloric expenditure of said individual for said time period using a wearable sensor device having one or more sensors; and

determining said caloric consumption from said caloric differential and said caloric expenditure.

161. (Withdrawn) A method according to claim 160, wherein said constant is 3500.

162. (Withdrawn) A method according to claim 160, wherein said step of measuring said caloric expenditure comprises:

collecting a plurality of sensor signals from at least two sensors in electronic communication with said sensor device, at least one of said sensors being a physiological sensor; and

utilizing a first set of signals based on one or more of said plurality of sensor signals in a first function, said first function determining how a second set of signals based on one or more of said plurality of sensor signals is utilized in one or more second functions, each of said one or more second functions having an output,

wherein one or more of said outputs are used to predict said caloric expenditure.

163. (Withdrawn) A method according to claim 162, wherein said first function recognizes one or more contexts based on said first set of signals, wherein one or more of said second functions is chosen based on said one or more recognized contexts, and wherein said outputs of said chosen second functions are used to predict said caloric expenditure.

164. (Withdrawn) A method according to claim 162, wherein said first function recognizes each of a plurality of contexts based on said first set of signals, wherein each of said one or more second functions corresponds to one of said contexts, wherein said first function assigns a weight to each of said one or more second functions based on a recognition probability associated with the corresponding context, and wherein said outputs of said one or more second functions and said weights are used to predict said caloric expenditure.

165. (Withdrawn) A method according to claim 162, said utilizing step further comprising combining said one or more outputs in a post processing step to predict said caloric expenditure.

166. (Withdrawn) A method according to claim 162, wherein said second functions are regression algorithms.

167. (Withdrawn) A method according to claim 164, wherein said contexts comprise rest and active.

168. (Withdrawn) A method according to claim 167, said first function comprising a naïve Bayesian classifier.

169. (Withdrawn) A method according to claim 162, said at least two sensors comprising a body motion sensor, a heat flux sensor and a skin conductance sensor.

170. (Withdrawn) A method according to claim 169, said body motion sensor being an accelerometer and said skin conductance sensor being a GSR sensor.